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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,216

04/02/2004

Robert Gonsalves

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EXAMINER

RAHMJOO, MANUCHER

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

12/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/817,216

Applicant(s)

GONSALVES ET AL.

Examiner

Mike Rahmjoo

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa (US Patent 6654028) in view of Frazier et al (US Patent 5081523).

As per claims 1 and 4 and as to the broadest reasonable interpretation by examiner, Yamakawa teaches a computer readable medium and program instructions corresponding to for example the use of DSP (digital signal processor) and ROM (read only memory) which inherently utilize computer codes and program instructions in column 27 line 64;

storing an input luminance value corresponding to a luminance of the pixel before color correction (the luminance from component input terminal 4 as input luminance prior to correction in the gamma correction circuit 5) see for example the abstract, fig. 1 and col. 27 lines 62-65 wherein ROM (read only memory) ,as a signal correction means, is used ;

performing a color correction operation on the pixel to provide color corrected components (e.g., R/G/B) for the pixel corresponding to for example the color correction of the three primary colors by the Gamma circuits in column 23 lines 49- 52;

determining an output luminance and output saturation corresponding to the color corrected components for the pixel corresponding to for example the increase in luminance and the lowering of the saturation causing the colors to become plain (e.g., the output) in column 14 lines 32- 47;

scaling the output saturation by the scaling factor to provide a corrected saturation corresponding to for example the lowering (corresponding to scaling) of color saturation relative to said luminance in column 14 lines 33- 47;

and using the input luminance (input luminance form component input terminal 4) and the corrected saturation ( relative lowering as corresponding to correction of the color saturation by increasing  $V_c$  (control signal voltage)) to provide values for the corrected pixel (to solve the problem of colors becoming plain by the increase in  $V_c$ ) corresponding to for example column 14 lines 33- 47.

However, Yamakawa does not explicitly teach determining a scaling factor according to a ratio of the input luminance to the output luminance.

Frazier teaches determining a scaling factor according to a ratio of the input luminance to the output luminance corresponding to for example the scale factor which is the ratio of nominal (test image input) intensity (e.g., luminance) to actual (display image output) intensity for the pixel in column 12 lines 29- 32;

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Frazier into Yamakawa to have the image correction subsystem compare the input test image with the output color display image on a pixel-by-pixel basis, and generate correction factors for

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each pixel that are stored in corresponding image correction memory maps and therefore control image beam position and/or intensity to achieve efficiency of the display see column 3 lines 5- 15.

As per claims 2 and 5 Yamakawa teaches the color correction operation on the pixel is a color matching operation whereby the pixel is modified to match at least a hue of a target color corresponding to for example the three primary color signals of red (R), green (G), blue (B) can be gamma-corrected (corresponding to hue) similarly to the above-mentioned luminance signal (corrections matching with characteristics of the respective signals corresponding to the matching with a hue of the target color) in column 27 lines 55- 65.

As per claims 3 and 6 Yamakawa teaches the corrected pixel is represented by a luminance component (e.g., output of Gamma circuit 5 of fig. 8) and chroma difference components (e.g., column 15 line 13 the output of the two color difference signals as inputs to color gain control circuit 13 in fig. 8), and wherein scaling comprises scaling (e.g., controlling via  $V_c$ ) the chroma difference components of the corrected pixel (corresponding to for example the output of color gain control circuit 13 of the two color difference signal which is controlled via  $V_c$  of gain control circuit 11) in column 14 lines 55- 65.

***Response to Arguments***

Applicant's arguments filed 11/05/2007 have been fully considered but they are not persuasive.

As per applicant's remarks on page 2, applicant argues "Thus, Frazier determines a ratio between an input intensity of a test image and a displayed intensity of the test image, and then applies this ratio as a correction factor to the intensity of pixels of other frames being displayed on the display. Frazier's system corrects for the discrepancy between a desired intensity and an actual intensity provided by a display device. Notably, Frazier does not obtain the intensity values for this ratio from the pixel to which the ratio is applied. Thus, Frazier does not teach scaling the output saturation of a color corrected pixel according to a ratio of the input luminance [for the pixel] to the output luminance [determined for the pixel]".

Examiner respectfully disagrees.

Examiner responds as follows:

1) the last non- final rejection dated 08/11/2007 recites "Yamakawa does *not explicitly teach* determining a scaling factor according to a ratio of the input luminance to the output luminance". Therefore examiner is not suggesting that Yamakawa is absent of implicit teaching of said claimed subject matter which is made in view of he secondary prior art made of the record e.g., Frazier. On the contrary, one of ordinary skill in the art (OOSA), and as to a broadest reasonable interpretation may interpret the teachings of Yamakawa to read on said ratio. In the portion cited which is made of the

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record(e.g., col. 14 lines 33- 47 ) Yamakawa teaches "however, it is considered that when only the luminance signal (Y) is increased by the correction, for example, the color saturation degree is *lowered (e.g., scaled) relatively* to (e.g., ratio) thereby cause colors to become plain"; examiner's broad interpretation that the increase of input luminance affects the output luminance as well.

Yamakawa further concludes "therefore, with respect to the two *color-difference signals* (R-Y) and (B-Y), by the provision of a *color gain* (e.g., said input/ output luminance ratio) control circuit in which the gain of input and output characteristics is increased (e.g., scaled) as the control signal (voltage) Vc, for example, is increased, it is possible to solve the problem in which the color saturation degree is lowered relatively."

2) in light of the previous rejections made of the record, examiner has clearly established the input/ output luminance and the relativity therein.

3) applicant does not even bother the primary art of the record and/ or any teachings therein and is solely focused on the secondary art (e.g., Frazier). It is respectfully reminded that said teachings of the secondary art are to be taken in view of the primary art in a 35 USC (103) rejection and not be focused on or piecemeal the arts individually. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

4) the secondary art (e.g., Frazier) is used for the explicit purpose of the teachings which are made of the record therein (e.g., ratio, scaling factor, and ...).

5) examiner fails to see the phrases provided in the brackets or the subject matter argued on page 2 last paragraph through page 3 1<sup>st</sup> paragraph as claimed e.g., "scaling the output saturation of a color corrected pixel according to a ratio of the input luminance to the output luminance".

6) finally, an OOSA would equally be motivated to modify Yamakawa to apply a scaling factor to a pixel, wherein the scaling factor is a ratio between an input intensity of a test image and a displayed intensity (e.g.: output) of the test image as taught by Frazier (which applicant refers to desired and actual intensities) because both of the primary and secondary arts made of the record are in the field of color correction and are therefore related. In this case, Frazier's adjustment of luminance is based on the difference in intensity between a test image (broadly corresponding to input luminance) and its actually displayed result (broadly corresponding to output luminance).

In response to applicant's argument that on page 3 wherein applicant recites "Moreover, such a combination would not result in the claimed invention because Frazier teaches using the ratio between an input intensity of a test image and a displayed intensity of the test image, and then applies this ratio as a correction factor to the intensity of pixels of other frames being displayed on the display - this ratio is not used in Frazier to correct the same pixel from which the intensity values are obtained", the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when



the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### **Inquiry**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo



November 12, 2007

**MATTHEW C. BELLA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**